



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/623,322	07/19/2003	Marion Calmer	USPA0018	3279

33512 7590 12/22/2004

LAW OFFICE OF JAY R. HAMILTON, PLC  
4300 E. 53RD ST.  
SUITE 103  
DAVENPORT, IA 52807

EXAMINER

TORRES, ALICIA M

ART UNIT	PAPER NUMBER
----------	--------------

3671

DATE MAILED: 12/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/623,322

Applicant(s)

CALMER, MARION

Examiner

Alicia M Torres

Art Unit

3671

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 October 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Response to Amendment***

1. The reply filed on 15 October 2004 is not fully responsive to the prior Office Action because of the following omission(s) or matter(s): the amended claims do not comply with the revised amendment practice under 37 CFR 1.121 because the claim sheet must include all claims and their status identifiers, the text of any pending claims, and any deletions and additions of amended claims.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

3. Claim 20 is rejected under 35 U.S.C. 102(b) as being anticipated by Sutton.

Sutton discloses the device wherein the following method of engaging corn plants with a corn head row unit is inherent, the method comprising the steps of:

- a. engaging the corn plant with a plurality of rotation elements (40),
- b. pinching the corn plant between the rotational elements (40),
- c. penetrating the corn plant stalk with the rotational elements (40) a pre-determined penetration depth, wherein the pre-determined penetration depth of each of the rotational elements (40) is less than half the diameter of the corn plant stalk,
- d. pulling the corn plant stalk with the rotational elements (40),
- e. the penetrating, pinching and pulling steps repeatedly lacerating the corn plant stalk along its length and width; and,

Art Unit: 3671

f. separating the corn plant ear from the corn plant stalk and husk.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-3, 6 and 7, 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Russell in view of Lundahl et al., hereafter Lundahl.

6. In regards to claim 1, Russell discloses an improved separation element of a corn head row unit comprising:

- a. a source of power (22) for rotation,
- b. at least two opposing stalk rolls (10, 12) connected to the power source (22),
- c. the stalk rolls (10, 12) having at least one flute (76),
- d. the flute (76) having at least one penetration point (78).

However, Russell fails to disclose wherein the penetration point is composed of hardened material.

Lundahl discloses a cutting edge for cutting crop wherein the penetration point is composed of hardened material.

Art Unit: 3671

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use hardened material as taught by Lundahl on the flute of Russell in order to improve wear and self-sharpening characteristics.

7. In regards to claims 2, 3, 6, 7 and 9, Russell discloses an improved separation element of a corn head row unit comprising:

- a. a source of power (22) for rotation,
  - b. at least two opposing stalk rolls (10, 12) connected to the power source (22),
  - c. the stalk rolls (10, 12) having at least one flute (76),
  - d. the flute (76) having a knife edge (78), as per claim 2; and
- wherein the knife edge (78) has a predetermined surface slope, as per claim 3; and
- wherein the opposing flutes (76) are tapered, as per claim 6; and
- wherein the opposing flutes (76) intermesh, as per claim 7; and
- wherein the opposing flutes (76, 80) surfaces have a plurality of radii along the length of the stalk roll, as per claim 9.

However, Russell fails to disclose wherein the entire knife edge is composed of hardened material, as per claim 2.

Lundahl discloses a cutting edge for cutting crop wherein the penetration point is composed of hardened material.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use hardened material as taught by Lundahl on the flute of Russell in order to improve wear and self-sharpening characteristics.

Art Unit: 3671

8. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Russell and Lundahl as applied to claim 3 above, and further in view of Calmer.

The device is disclosed as applied to claim 3 above. However, the combination fails to disclose wherein the knife edges have a forward slope relative to the direction of rotation of each of the stalk rolls, as per claim 4; and

Wherein the knife edges of opposing flutes have a predetermined surface slope and the angle of the slopes of opposing flutes are identical, as per claim 5.

Calmer discloses a similar stalk roll wherein the knife edges (14a) have a forward slope relative to the direction of rotation of each of the stalk rolls (14), as per claim 13; and

Wherein the knife edges (14a) have a predetermined surface slope and the angle of the slopes of opposing flutes are identical, as per claim 14.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the knife edges of Calmer on the device of Russell and Lundahl as is known in the prior art.

9. Claims 8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Russell and Lundahl as applied to claim 2 above, and further in view of Sutton.

The device is disclosed as applied to claim 2 above. However, the combination fails to disclose wherein the radius of the opposing flute surfaces is reduced in discrete increments along the length of the stalk roll, as per claim 8; and

Wherein the radius of the leading edge of the flute is less than the trailing edge of the flute in relation to the direction of rotation of the stalk roll, as per claim 10.

Sutton discloses a similar stalk roll wherein the radius of the opposing flute surfaces (45) is reduced in discrete increments along the length of the stalk roll (40), as per claim 8; and

Wherein the radius of the leading edge of the flute (45) is less than the trailing edge of the flute (45) in relation to the direction of rotation of the stalk roll (40), as per claim 10.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the change in flute radius of Sutton on the stalk roll of Russell and Lundahl in order to minimize damage to and bruising of the ear.

10. Claims 11, 12 and 15-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sutton in view of Lundahl.

Sutton discloses an improved separation element of a corn head row unit comprising:

- a. a source of power (unnumbered) for rotation,
  - b. at least two opposing stalk rolls (40) connected to the power source,
  - c. each of the stalk rolls (40) having at least one flute (45) wherein the flutes (45) are opposite each other,
  - d. the flutes (45) having a knife edge (46), as per claim 11; and
- wherein the distance between the opposing flutes (45) decreases along the length of the stalk rolls (40), as per claim 12;
- wherein the radius of the opposing flute surfaces (45) is reduced in discrete increments along the length of the stalk roll (40), as per claim 15; and
- wherein the opposing flutes surfaces (45) have a plurality of radii along the length of the stalk roll (40), as per claim 16;

Art Unit: 3671

wherein the radius of the leading edge of the flute (45) is less than the trailing edge of the flute (45) in relation to the direction of rotation of the stalk roll (40), as per claim 17; and

wherein the opposing flutes (45) are substantially in the shape of a trapezoid, as per claim 18; and

wherein a substantially trapezoidal shaped void created is between the opposing flutes (45) when opposite each, as per claim 19.

However, Sutton fails to disclose wherein the entire knife edge is composed of hardened material, as per claim 11.

Lundahl discloses a cutting edge for cutting crop wherein the penetration point is composed of hardened material.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use hardened material as taught by Lundahl on the flute of Sutton in order to improve wear and self-sharpening characteristics.

11. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sutton and Lundahl as applied to claim 12 above, and further in view of Calmer.

The device is disclosed as applied above. However, the combination fails to disclose wherein the knife edges have a forward slope in relation to the direction of rotation of the stalk rolls, as per claim 13; and

Wherein the knife edge has a predetermined surface slope per stalk roll and the angles of the slopes are identical, as per claim 14.



Calmer discloses a similar stalk roll wherein the knife edges (14a) have a forward slope in relation to the direction of rotation of the stalk rolls (14), as per claim 13; and

Wherein the knife edge (14a) has a predetermined surface slope per stalk roll (14) and the angles of the slopes are identical, as per claim 14.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include the knife edges of Calmer on the device of Sutton and Lundahl as is known in the prior art.

#### ***Response to Arguments***

12. In response to Applicant's argument that Sutton discloses a less efficient corn head row unit, Applicant is arguing more than claimed. It is noted that the features upon which applicant relies (i.e., less damage to the ears, details of how and where the ear is separated from the stalk) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The claims do not exclude any of the steps that would be followed with the device of Sutton. Also, Sutton is not used to reject claims relating to the stalk roll cutting edge angle.

In regards to the Applicant's arguments regarding Lundahl et al., Lundahl is used merely to show that it is known in the art to use a hardened material to cut crops. Applicant is arguing more than what is claimed.

In regards to Applicant's argument that Russell requires the use of a "pressure resisting bar", the claims are all of the comprising-type which are non-exclusive.

13. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

#### ***Conclusion***

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

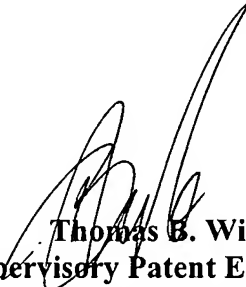
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alicia M. Torres whose telephone number is 703-305-6953. The examiner can normally be reached Monday through Thursday from 7:00 a.m. – 4:30 p.m.

Art Unit: 3671

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas B. Will, can be reached at 703-308-3870.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is 703-305-1113. The fax number for this Group is 703-872-9306.



**Thomas B. Will**  
**Supervisory Patent Examiner**  
**Group Art Unit 3671**

AMT  
December 13, 2004